

AMENDMENTS TO THE CLAIMS

(IN FORMAT COMPLIANT WITH THE REVISED 37 CFR 1.121)

Please cancel claims 5 and 14 without prejudice.

1. (CURRENTLY AMENDED) An apparatus comprising:

a tuner circuit configured to generate an intermediate frequency signal having a carrier signal at a first intermediate frequency in response to a first frequency conversion applied to a radio-frequency signal modulated by an analog television signal;

an analog-to-digital circuit configured to generate a digital intermediate signal having said carrier signal at a second intermediate frequency in response to a digitization of said intermediate frequency signal, wherein said second intermediate frequency is above a baseband frequency; ~~and~~

a converter circuit configured to generate a digital television signal representative of said analog television signal at said baseband frequency in response to a demodulation of said digital intermediate signal; and

a detector circuit configured to generate a level signal in response to an average level of a horizontal synchronization pulse within said digital intermediate signal.

2. (PREVIOUSLY PRESENTED) The apparatus according to claim 1, wherein said converter circuit further comprises:

a translation circuit configured to generate a digital baseband signal in response to a multiplication of said digital intermediate signal by a single sinusoid signal; and

a decimation circuit configured to generate said digital television signal in response to a decimation of said digital baseband signal.

3. (ORIGINAL) The apparatus according to claim 2, wherein said decimation circuit comprises a decimation filter configured to decimation filter said digital baseband signal.

4. (PREVIOUSLY PRESENTED) The apparatus according to claim 1, wherein said converter circuit comprises:

a first decimation filter configured to generate a first signal in response to said digital intermediate signal;

a circuit configured to generate a second signal in response to an image scaling of said first signal by a predetermined ratio; and

a second decimation filter configured to generate said digital television signal in response to said second signal.

5. (CANCELED)

6. (CURRENTLY AMENDED) The apparatus according to claim
5 1, further comprising:

a decimation circuit configured to generate a second
level signal in response to a second average level of a second
5 horizontal synchronization pulse within said digital television
signal; and

a control circuit configured to generate a feedback
signal in response to said signal level said second level signal.

7. (PREVIOUSLY PRESENTED) The apparatus according to
claim 1, wherein said analog-to-digital circuit is further
configure to generate a saturation signal in response to a digital
conversion saturation while generating said digital intermediate
5 signal, said apparatus further comprising a control circuit
configured to adjust a feedback signal in response to said
saturation signal.

8. (PREVIOUSLY PRESENTED) The apparatus according to
claim 1, wherein said converter circuit comprises:

a phase detector circuit configured to generate an error
signal in response to a detection of both a phase error and a
5 frequency error of said digital intermediate signal relative to a
sinusoid signal;

a filter circuit configured to generate a feedback signal in response to said error signal;

an oscillator circuit configured to generate a sawtooth signal in response to said feedback signal; and

a lookup table circuit configured to generate a single sinusoid signal in response to a table look-up conversion of said sawtooth signal.

9. (PREVIOUSLY PRESENTED) The apparatus according to claim 1, further comprising a tracking detector circuit configured to generate an enable signal in response to a tracking of a horizontal synchronization signal within said digital intermediate signal, wherein said converter circuit includes a filter circuit configured to generate a feedback signal in response to said enable signal.

10. (CURRENTLY AMENDED) A method of demodulating a radio-frequency signal modulated by an analog television signal, the method comprising the steps of:

(A) generating an intermediate frequency signal having a carrier signal at a first intermediate frequency in response to a first frequency conversion applied to said radio-frequency signal;

(B) generating a digital intermediate signal having said carrier signal at a second intermediate frequency in response to a digitization of said intermediate frequency signal, wherein said second intermediate frequency is above a baseband frequency; and

(C) generating a digital television signal representative of said analog television signal at said baseband frequency in response to demodulating said digital intermediate signal; and

(D) generating a level signal in response to an average level of a horizontal synchronization pulse within said digital intermediate signal.

11. (PREVIOUSLY PRESENTED) The method according to claim 10, wherein step (C) comprises the sub-steps of:

generating a digital baseband signal in response to a multiplication of said digital intermediate signal by a single sinusoid signal; and

generating said digital television signal in response to a decimation of said digital baseband signal.

12. (ORIGINAL) The method according to claim 11, wherein generating said digital television signal comprises the sub-step of decimation filtering said digital baseband signal.

13. (PREVIOUSLY PRESENTED) The method according to claim 11, wherein generating said digital television signal comprises the sub-step of:

generating a first signal in response to a first
5 decimation filtering applied to said digital baseband signal.

14. (CANCELED)

15. (CURRENTLY AMENDED) The method according to claim ~~14~~
10, further comprising the steps of:

generating a second level signal in response to a second
average level of a second horizontal synchronization pulse within
5 said digital television signal;

generating a feedback signal in response to said second
level signal; and

adjusting an amplitude of said intermediate signal in
response to said feedback signal to maintain said second average
10 level proximate a predetermined threshold.

16. (PREVIOUSLY PRESENTED) The method according to claim
10, further comprising the steps of:

generating a saturation signal in response to a digital
conversion saturation while generating said digital intermediate
5 signal; and

adjusting a feedback signal in response to said saturation signal.

17. (PREVIOUSLY PRESENTED) The method according to claim 10, further comprising the steps of:

generating an error signal in response to a detection of both a phase error and a frequency error of said digital intermediate signal relative to a sinusoid signal;

generating a feedback signal in response to said error signal;

generating a sawtooth signal in response to said feedback signal; and

generating a single sinusoid signal in response to a table look-up conversion of said sawtooth signal.

18. (PREVIOUSLY PRESENTED) The method according to claim 10, further comprising the steps of:

generating an enable signal in response to a tracking of a horizontal synchronization signal within said digital intermediate signal; and

generating a feedback signal in response to said enable signal.

19. (CURRENTLY AMENDED) An apparatus comprising:

means for generating an intermediate frequency signal having a carrier signal at a first intermediate frequency in response to a first frequency conversion applied to a radio-frequency signal modulated by an analog television signal;

means for generating a digital intermediate signal having said carrier signal at a second intermediate frequency in response to a digitization of said intermediate frequency signal, wherein said second intermediate frequency is above a baseband frequency;

and

means for generating a digital television signal representative of said analog television signal at said baseband frequency in response to demodulating said digital intermediate signal; and

means for generating a level signal in response to an average level of a horizontal synchronization pulse within said digital intermediate signal.

20. (PREVIOUSLY PRESENTED) The method according to claim 13, wherein generating said digital television signal further comprises the sub-step of:

generating a second signal in response to an image scaling of said first signal by a predetermined ratio.

21. (PREVIOUSLY PRESENTED) The method according to claim 20, wherein generating said digital television signal further comprises the sub-step of:

generating said digital television signal in response to
5 a second decimation filtering applied to said second signal.

22. (CURRENTLY AMENDED) The method according to claim ~~14~~
10, further comprising the step of:

generating a feedback signal in response to said level
signal.

23. (PREVIOUSLY PRESENTED) The method according to claim 22, further comprising the step of:

adjusting an amplitude of said intermediate signal in
response to said feedback signal to maintain said average level
5 proximate a predetermined threshold.